

REMARKS

This application has been reviewed in light of the Office Action dated July 11, 2003. Claims 1-27 are pending in this application. Claims 1, 2, 5, 6-13, 16, 17, and 20-25 have been amended to define still more clearly what Applicants regard as their invention. Claims 1, 17, 20, 22, 25, and 26 are in independent form. Favorable reconsideration is requested.

Applicants respectfully request withdrawal of the finality of this Office Action. Section 706.07(a) of the MPEP states, among other things, that “a second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is [not] necessitated by applicant’s amendment of the claims....” Independent Claim 26 was not amended in the Amendment dated April 21, 2003, and thus the new rejection based on newly-cited U.S. patent No. 6,254,217 (Askeland et al.) was improper. Accordingly, Applicants request vacation of the improper finality, and issuance of a new Action.

The Office Action rejected Claims 1-5, 9-17, 20, 22, and 24 under 35 U.S.C. § 102(b) as being anticipated by Askeland et al.; Claims 25-27, under 35 U.S.C. § 103 (a) as being obvious from Askeland et al.; and Claims 6-8, 18, 19, 21, and 23 as being obvious from Askeland et al. in view of U.S. Patent No. 4,593,295 (Matsufuji et al.). Applicants respectfully traverse these rejections.

Applicants submit that independent Claims 1, 17, 20, 22, 25, and 26, together with the remaining claims dependent thereon, are patentably distinct from the cited prior art at least for the following reasons.

The aspect of the present invention set forth in Claim 1 is a print apparatus which forms a color image by applying ink materials of plural colors onto a print medium, using a recording means that includes a plurality of nozzle arrays arranged along a

predetermined direction, the nozzle array having a plurality of nozzles to eject ink materials. The print apparatus includes a scanner and a print controller. The scanner scans along the predetermined direction the recording means in forward scanning and backward scanning directions. The print controller controls the printing so that a printing means executes the printing while the scanner scans the recording means in the forward scanning and the backward scanning directions.

The print controller applies plural ink materials for each pixel area, the pixel area serving as a unit area to form a primary or secondary color thereon. At plural positions on a pixel area for forming the secondary color thereon, the print controller forms dots of the secondary color, in ink materials of plural colors for forming the secondary color. In the printing of such a secondary color, the ink materials are applied in a symmetric order, or sequence, with regard to the ink material of a predetermined color and ink material of the second color.

Notable features of Claim 1 are that dots of a secondary color (formed by overlapping plural color inks) are formed on a pixel with the application order of color inks used in forming the dots of the secondary color being symmetric.

Askeland et al., as understood by Applicants, relates to an apparatus and method for hue shift compensation in a bi-directional printer. In Askeland et al., the print masks for different color inks are used to adjust the order of drop deposition and the amounts of each different color ink deposited, to minimize hue shift due to a differing deposition order of different color ink drops. Moreover, as shown in Figures 8A-8C, different print masks for each color ink are used to govern ink deposition in the different scan directions in order to vary the deposition order and/or number of drops deposited in a given pixel location. Applicants submit, however, that since these masks are used to mask data to be recorded, some of the data are recorded concurrently with the masks, so that

there are recorded some pixels where the application orders of color inks are equal to each other. In summary, Applicants submit that nothing has been found in Askeland et al. that would teach or suggest the features of dots of a secondary color being formed on a pixel with the application order of color inks used in forming the dots of the secondary color being symmetric.

Accordingly, Applicants submit that, at least for these reasons, Claim 1 is patentable over Askeland et al.

Independent Claim 20 is a method claim and Claim 25 is an apparatus claim that correspond to apparatus Claim 1, and these claims are believed to be patentable for at least the same reasons as discussed above in connection with Claim 1. Additionally, independent Claim 26 is directed to a data buffer that includes the same features of plural dots of a secondary color being recorded on the same pixel and an application order of colors regarding the plural dots being symmetric, as discussed above in connection with Claim 1. Accordingly, Claim 26 is believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.

The aspect of the present invention set forth in Claim 17 is a print apparatus which forms a color image by applying ink materials of plural colors onto a print medium using a recording means that includes a plurality of nozzle arrays arranged along a predetermined direction, the nozzle array having a plurality of nozzles to eject ink materials. The apparatus includes a scanner to scan along the predetermined direction the recording means in forward scanning and backward scanning directions. A print controller controls the printing by applying plural ink materials for each pixel area, the pixel area serving as a unit area to form a color thereon. The print controller forms a plurality of dots of a process color (i.e., one made use two of the colors of ink), in printing during one scan of the recording means by the scanner, on a pixel area. The application order of the ink

materials of plural colors for forming the process color is symmetric.

Notable features of Claim 17 include plural dots of the secondary color being recorded onto one pixel by one scan, and the application orders of colors for the plural dots are different.

In Askeland et al., color inks are deposited on the print medium by scanning the recording means several times. In contrast, in a print apparatus having the features recited in Claim 17, plural dots of the secondary color are recorded onto one pixel by one scan, and Applicants submit that nothing has been found in Askeland et al. that would teach or suggest the features of plural dots of the secondary color being recorded onto one pixel by one scan, and the application orders of colors for the plural dots being different.

Accordingly, Applicants submit that, at least for these reasons, Claim 17 is patentable over Askeland et al.

Independent Claim 22 is a method claim that corresponds to apparatus Claim 17, and is believed to be patentable for at least the same reasons as discussed above in connection with Claim 17.

A review of the other art of record, including Matusfuji et al, has failed to reveal anything that, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as applied against the independent claims herein. Therefore, those claims are respectfully submitted to be patentable over the art of record.

The other rejected claims in this application depend from one or another of the independent claims discussed above, and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

This Amendment After Final Action is believed to place this application in condition for allowance and, therefore, its entry is believed proper under 37 C.F.R. § 1.116. Accordingly, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, it is respectfully requested that the Examiner contact Applicants' undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,


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